School Nurse Job Satisfaction, Provision of Health Education, and Student Attendance

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Abstract

School nurses have a large scope of practice (American Nurses Association [ANA] & National Association of School Nurses [NASN], 2011). However, school administrators often misunderstand, and therefore under appreciate, the school nurses’ role (Junious et al., 2004). In addition, few schools meet the 1:750 nurse to student ratio recommended by the NASN and the ANA (2011); high nurse to student ratios negatively affect school nurses’ job satisfaction (Maughn & Adams, 2011). Several studies found that interventions by the school nurse positively impacted students (Bonaito, 2007; Denny et al., 2012), while others have linked the presence of a school nurse with improved attendance (Pennington & Delaney, 2008; Telljohann, Dake, & Price, 2004). The current study surveyed nurses working at schools in Illinois, and adds to this body of research by examining the relationship between the time school nurses spend on classroom health education and their job satisfaction as well as the correlation between classroom education, job satisfaction, and student attendance. School nurses were more satisfied when they made more visits to the classroom for health education, and when they thought that students received adequate health education from the school nurses. School nurses who served higher numbers of students were less likely to think that students received adequate health education. Attendance rates were not significantly correlated with nurses’ job satisfaction or number of classroom visits. This results suggest that when nurse are able to practice to the extent of their education, they are more satisfied with their jobs, and feel like they are able to impact students.
School Nurse Job Satisfaction, Provision of Health Education, and Student Attendance

More than 53 million students spend the majority of their day in school, usually for 13 of the most formative years of their lives (Kolbe et al., 2004). If they are lucky, these children benefit from the services of a school nurse. School nurses play many roles and have a large scope of practice. However, school nurses are often viewed as responsible only for first aid, medication administration, and keeping health records. While school nursing includes these tasks, school nurses also promote health and safety, address existing and potential health problems, and perform screenings (Schoessler, 2011). In addition to health promotion, school nurses are also health educators and policy influencers (Broussard, 2004). School nurses can be involved in management, counseling, leadership, and advocacy (Costante, 2006). While there are noted benefits of school nurses to students, managing these many roles is a challenge for school nurses.

In addition to this wide scope of practice, school nurses meeting their responsibilities is also challenging due to a diverse student population and increasing rates of asthma, diabetes, food allergies, obesity, and mental health issues (Bergren, 2013). Combined with a national nurse-to-student ratio of 1:1151, well over the 1:750 ratio recommended by the ANA and NASN (2011), the increased acuity of student health problems makes it challenging for school nurses to practice to the full extent of their education and licensure, and therefore difficult to improve the health and wellness of school children (Fleming, 2012).

Review of the Literature

Impact of School Nurses

School nurses can positively impact student health and wellness, which then improve their academic outcomes. Several studies found that, when a school nurse was employed in a school, attendance improved and fewer children were sent home during the day. Hill & Hollis
School nurses' job satisfaction & student attendance (2012) found that, when a school nurse was present, significantly fewer early dismissals occurred. Allen (2003) studied 11 schools with a full time RN and 11 schools without an RN; all schools had similar demographic characteristics. Fewer children left school for medical reasons when a full-time school nurse was employed. Foster & Keele (2006) studied the implementation of a program allowing school nurses to administer over-the-counter medications. Of the 23 schools implementing the program 13 had a lower "send home" rate, meaning that students' symptoms were relieved and they were able to return to class, after program implementation. However, the overall decrease in the send-home rate was not statistically significant, Z(23) = -.37; p = .72. In a study of four elementary schools, Pennington & Delaney (2008) found that 5% of students seen by the school nurse and 18% of students seen by the unlicensed employee were sent home. In addition to keeping students in the classroom, school nurses positively impact students' health.

Having a school nurse was correlated with increased rates of immunization, increased accuracy of medical records (Baisch, Lundeen, & Murphy, 2011), and increased follow-up for school-related injuries and vision problems (Guttu, Engelke & Swanson, 2004). Salmon et al. (2004), found that, when they received information from a school nurse rather than an unlicensed employee, parents were more likely to have their kids receive immunizations. Furthermore, unlicensed personnel have increased rates of medication error compared to school nurses (Canham et al., 2007).

School nurses have also been shown to impact specific health problems. School nurse presence has been associated with fewer pregnancies (Denny et al., 2012) and school nurse provided educational programs can significantly improve students' knowledge of mental health and mental illness (Desocio, Stember & Schrinsky, 2006). The attention of a school nurse can
decrease HbA1c percent levels in diabetic students and increase students’ ability to manage their illness (Nguyen, Mason, Sanders, Yazdani, & Heptulla, 2008; Engelke, Guttu, & Warren, 2009). Halterman et al. (2004) studied 180 children either enrolled in a school nurse-run program to control their asthma or receiving usual care. The researchers found that children in the school nurse-run program had more symptom-free days (mean days per 2-week period, 9.2 vs 7.3; \( p = .02 \)), had fewer days needing rescue medication (1.6 vs 2.3; \( p = .03 \)), and were less likely to need three or more acute visits for asthma (13% vs 31%; \( p = .03 \)). Children in the program also missed fewer school days, although this finding was not significant (mean total days missed, 6.8 vs 8.8; \( p = .47 \)). Furthermore, when students with asthma were case managed by school nurses, their quality of life and grades improved (Engelke et al., 2009).

Coupled with the fact that school nurses are not recognized for providing educational services or contributions to public health (Fleming 2012), administrators assume that anyone can be trained to perform a school nurse’s duties (Tutuan et al., 2004). However, as described above, school nurses provide superior care compared to unlicensed personnel. The misunderstandings of the school nurse’s scope of practice compared to an unlicensed personnel can be a barrier to improving the nurse-to-student ratio (Maughn, 2009), which can significantly impact student health (Guttu, Engelke & Swanson, 2004).

Despite these studies, an abundance of literature suggests that there is a need for evaluation studies that identify and record measureable outcomes to demonstrate the effectiveness of school nurses (Bergren, 2011; Bergren & Faulkner, 2003; Cowell, 2012; Engelke et al., 2009; Selekm & Guildat, 2003; Yearous, 2008). Vigorous research is essential to document the impact of school nurses on student attendance, as well as other health outcomes. This research is needed to influence school health practices, increase the visibility of school
nurses, and demonstrate their importance (Rodriguez, Austria & Landai, 2011; Sheetz, 2012; Ryberg, Keller, Hine, & Christeson, 2003; Johnson, Begren & Westbrook, 2012).

Job Satisfaction

Measures of Job Satisfaction. While school nurses can significantly impact student health, their effectiveness may be lessened by poor job satisfaction. As stated by Stamps (1997), the six variables that affect job satisfaction are autonomy (work-related independence), interactions, organizational policies, pay, professional status, and task requirements. Stamps developed the Index of Work Satisfaction (IWS), a two-part questionnaire to measure these six variables. It was originally designed to measure job satisfaction among nurses working in hospital and health clinic settings. Since its development, the IWS has been used in several studies to evaluate the relationship between nurse job satisfaction and other variables. Higher job satisfaction of nurses in traditional healthcare settings has been linked to lower incidence of burnout and job-related stress and improved patient satisfaction (Johnston, 1991; Spence Laschinger, Finegan, & Shambian, 2001; Stamps, 1997; Tumulty, Jernigan, & Kohit, 1994, as cited in Foley, Lee, Wilson, Cureton, & Canham, 2004).

Foley et al. (2004) modified questions of the IWS to reflect school nursing rather than hospital nursing by replacing “patient” with “student” and “hospital” with “school district”. The convenience sample of 299 school nurses identified autonomy and interactions as the most satisfying components of their job, but were overall dissatisfied.

Factors that Impact Job Satisfaction. While job satisfaction has been thoroughly studied in hospital nurses, there are unique factors affecting school nurses’ job satisfaction. First, their role and qualifications are often poorly understood by parents and administration, which can negatively impact school nurses’ job satisfaction (Capparelli & Ilardi, 2005; Maughn &
Adams, 2011; Cowell, 2012). Misconceptions exist as to what school nurses actually do, such as the idea that they only take care of minor playground injuries (Gurmankin, 2006). These misconceptions can lead administrators to see school nurses as performing tasks rather than making judgments.

A second issue affecting school nurses that could affect job satisfaction is high student-to-nurse ratios. Maughan and Adams (2011) found that, at schools that had higher ratios than 1:750, as recommended by the National Association of School Nurses, the nurses expressed less job satisfaction. Nurses stated they were not able to make the impact they wish they could due to these high ratios.

Another factor that may contribute to low job satisfaction among school nurses is a lack of support in the school setting (Broussard, 2007). School nurses identified being supervised by non-nursing personnel as an issue. Furthermore, school nurses said that there was a need for supervisors to receive ongoing education on the complexity of the school nurse role, so that their role could be better understood. Additional professional concerns include lack of professional development, low compensation, and lack of uniform health standards for students across the nation, and even within districts, which can cause confusion as to the role of the school nurse (Capparelli & Ilardi, 2005).

Several studies identified autonomy as an important component to school nurses’ job satisfaction. Denehy (2008) and DeSisto and Desisto (2004) found that school nurses had substantial autonomy and Foley et al. (2004) found that autonomy was the most satisfying component of their job.

There are several factors unique to school nurses that are associated with job dissatisfaction. Foley et al. (2004), reported that school nurses are relatively dissatisfied with
their jobs; pay and task requirements were the least satisfying aspects. Denehy (2008) identified that school nurses felt isolated and identified salary, lack of supplies and heavy workload as areas of dissatisfaction. A study by DeSisto and DeSisto (2004) indicated that school nurses had minimal access to formal power structures. The article suggests that understanding the organizational structure of the workplace can increase job satisfaction. A study by Junious et al. (2004) found that 61% of school nurses reported that problems with job satisfaction were created by uncooperative staff and parents. When asked what could be done to increase satisfaction, the majority of school nurses mentioned a career ladder or pay scale to differentiate associates degree and baccalaureate prepared nurses.

Smith & Firmin (2009) aimed to identify themes related to school nurse job satisfaction and conducted a qualitative study of 25 school nurses. The major themes in their findings were transitioning, a wide scope of practice, and relationships. Job satisfaction is unstable during the first few years in school nursing, and school nurses’ level of job satisfaction is dependent upon how successfully they transitioned into the role. Many new school nurses were surprised by the extremely wide scope of practice; their views of school nursing were inconsistent with reality and they were overwhelmed by the multitasking required. School nurses identified positive relationships with students and families and confirmation from students that they were creating a warm and accepting atmosphere as major contributions to their job satisfaction. School nurses’ perception of students’ well-being was also identified as a major contributing factor to school nurse satisfaction.

The current study explores factors associated with school nurses’ job satisfaction. With limited research on job satisfaction in school nurses, this current study surveyed nurses working in schools in Illinois with diverse educational backgrounds. This study expands upon existing
research by examining job satisfaction in nurses with differing educational preparation and certification; educational preparation and certification of samples were rarely included in the studies described above. In addition, the study looks at correlations between job activities, such as classroom education and paperwork, on job satisfaction. Finally, the relationship between job satisfaction and student attendance is explored.

**Research Questions**

Despite the literature described above, there is a need for research to identify and record measurable outcomes of effective school nurses. No available research differentiates the impact of school nurses based on whether or not they are certified and what aspects of their background and job duties impact their job satisfaction. Using data from a survey sent to school nurses and from school districts’ report cards (available online), this study aims to answer the following questions:

- Is a school nurse’s job satisfaction correlated with student attendance?
- Is a school nurse’s job satisfaction associated with the time they spend on classroom education?
- Is the amount of time a school nurse spends on classroom education correlated with student attendance?
- Does a school nurses’ educational background impact job satisfaction or student attendance?

**Method**

**Participants**

Any nurse working in a public school in the State of Illinois was eligible to participate in the survey. Nurses were invited to participate if their contact information was available via
schools’ websites, and consent was implied if they started the survey. At times, it was difficult to determine from the website whether or not the person working in the health office was a nurse or not, so some of the survey invitations were sent to unlicensed health office staff. Approximately 10-14 days after initial emails were sent, people who had not responded received a reminder email. There are 865 school districts in the State of Illinois (Illinois State Board of Education, 2013); 1513 emails were sent and 355 nurses responded. The study protocol was approved as exempt by the Institutional Review Board at Illinois Wesleyan University, including a waiver of signed consent. Appendix A contains the survey invitation and the informed consent statement at the start of the survey.

**Measures**

**Job satisfaction.** The survey included 31 Lickert-type questions related to job satisfaction, which asked participants the extent to which they agreed with statements. Twenty-four items were used, with permission, from part B of Stamps (1997) “Nurses and work satisfaction: An index for measurement” (IWS). The IWS has been used to reliably measure hospital-based nurses’ job satisfaction, with an average Cronbach’s α of 0.85 (Stamps, 1997). The IWS has also been used to measure job satisfaction of nurses who do not work in a hospital (Best & Thurston, 2006), and remains reliable when question wording is changed to reflect the work setting, α = 0.71-0.87 (Taunton et al., 2004). The IWS survey consists of two parts. Part A measures the degree of importance for each of the six components of job satisfaction, while part B measures the current level of satisfaction of each of the six components. For simplicity of data analysis, this study only included part B. Several studies have used only part B, and a meta-analysis by Zangaro & Soeken (2005) showed that the reliability for part B across 14 studies was .78 (df = 13, p < .05).
With permission, some items were altered to become relevant to nurses working in schools, such as changing “hospital” to “school” or “patients” to “students”. To reduce survey length and increase relevance to the population, some items were omitted. Omitted items included those that referred to all nurses working in a hospital, as many nurses are the only nurse working in their school or district (see Table 1 for all IWS questions and whether they were included with modification, included without modification, or omitted). Four additional questions were developed by the researcher and included in the survey to reflect the findings of Smith & Firmin (2009), who found that higher job satisfaction was related to school nurses’ success transitioning to the role, positive nurse-student interactions, positive relationships with families, and confirmation from students. The survey also asked whether nurses feel that the students receive adequate health education sessions from the school nurse in the classroom per year. Appendix B contains all survey items associated with job satisfaction.

**Classroom education.** The survey included several questions related to school nurse-provided education. The survey asked participants to estimate the number of hours per week they spend on “classroom education” as well as other activities including “direct care,” “one-one-one student education,” “record/paperwork keeping,” and “communicating with parents, administration, or teachers.” The survey asked how many visits participants made to classes for health education in a school year. Data was also collected on what topics were covered in these classroom sessions such as nutrition, exercise, and dental hygiene.

**Student attendance.** Student attendance rate data was obtained from the Illinois school report card, available online (Illinois State Board of Education, 2014). The attendance rates are calculated as the aggregate days of student attendance, divided by the sum of the aggregate days of student attendance and aggregate days of student absence, multiplied by 100.
Job characteristics. In addition to data collected regarding job satisfaction and classroom education, the online survey also included questions concerning the number of students served by the nurse, number of other health staff employed by the district and school, if the nurse is responsible for students at multiple buildings or schools in the district, whether they are salaried or work hourly, and if they are considered full-time.

Nurses’ credentials. Unlike most of the existing literature, this study collected data about school nurses’ credentials. Participants were asked to indicate their highest level of education, as well as if their highest degree was in nursing or a non-nursing discipline. Participants also indicated what type of nursing license they currently held and if they were a certified school nurse at the state or national level.

Results

Participants were recruited via email addresses that were available on the school webpages. Initially, 1513 emails were sent, and after 10-14 days, people who had not responded received a reminder email. A total of 355 participants returned the survey, a 23% response rate. This low response rate may be due, in part, to the invitation being sent to out-of-date email addresses and including emails of health office staff who may not have been nurses, as well as due to nurses choosing not to participate.

Participant Characteristics

Most nurses working in schools were registered nurses (88.6%), while 4.2% reported being an Advanced Practice Nurse. Another 1.9% reported being a Licensed Practical Nurse and 5% responded none of the above (see Table 2).

Registered nurses with a bachelor’s degree (in nursing) or higher are eligible to become certified school nurses. In Illinois, certification requires 30 classroom hours, 300 internship
hours, and passage of the school nurse content examination through the Illinois State Board of Education (Illinois Association of School Nurses, 2012). Of the participants who are RNs, 33.4% have a bachelor's degree in nursing, 11.3% have completed the school nurse certification courses, and 25.6% have a master's degree in nursing (8.7%), education (11.9%), or another field (5%). Thirteen participants are APNs, most of whom hold a master's degree in nursing. Table 3 shows the level of education of all survey participants.

More than half (52.4%) of RNs who participated in the survey are certified school nurses; as were nine of the 13 APNs. A few nurses, all RNs, (3.1%) are currently enrolled in courses for school nursing certification. Others indicated they would like to take courses for certification: 20.7% of RNs and three of the four APNs who are not currently certified.

Reliability

The IWS items used (including those modified) were found to reliably measure job satisfaction (24 items; α = 0.962). These IWS questions, when combined with the four additional job satisfaction items created by the researcher, were also reliable (28 items, α = 0.968).

Job Satisfaction, Classroom Education, and Number of Students Served

Out of the six components of job satisfaction on the IWS (pay, autonomy, task requirements, organizational policies, professional status, and interaction), participants were most satisfied with professional status, $M = 5.47$, and autonomy, $M = 5.34$, and were least satisfied with organizational policies, $M = 3.72$. The overall job satisfaction score for the sample was 4.96. See Table 4 for mean scores.

The median time spent each week on activities is 0 hours on classroom education, $M = 0.37$; 20 hours on direct care, $M = 20.22$; and 10 hours on record keeping and paperwork, $M =$
12.55. The most common number of visits per year to the classroom for health education was 0, \( M = 5.79 \), range 0-104.

The largest portion of participants (39.9%) served 501-1000 students. A total of 34.3% of nurses served more than 1000 students (13.9% served 1001-1500 students, 5.2% served 1501-1800 students, 1.9% served 1801-2000 students, and 13.3% served more than 2000 students). The smallest portion of nurses served fewer than 500 students; 25.4% served 100-500 students, and 0.3% (one participant) served less than 100 students. Number of students the school nurse served was significantly negatively correlated with agreement with the statement “The students at this school receive adequate health education sessions from the school nurse in the classroom”, \( r = -0.146, n = 359, p = .006 \), and positively correlated with level of education, \( r = 0.345, n = 360, p = .000 \).

The there was a positive, significant correlation between the total IWS total score and number of visits the participants made to classrooms for education, \( r = 0.103, n = 323, p = .032 \). There was also a significant positive correlation between total IWS score and the agreement with the statement “The students at this school receive adequate health education sessions from the school nurse in the classroom” \( r = 0.279, n = 331, p = .000 \). Although not statistically significant, there was a negative correlation between job satisfaction and number of students served, \( r = -0.101, n = 335, p = .64 \). IWS score was not significantly correlated with level of license or certification, \( r = 0.027, n = 333, p = .62 \), or highest level of education, \( r = -0.031, n = 333, p = .064 \).

The number of visits made to classrooms was also significantly positively correlated with being a Certified School Nurse, \( r = 0.122, n = 346, p = .012 \), and agreement with the statement
“The students at this school receive adequate health education sessions from the school nurse in the classroom”, $r = 0.306$, $n = 343$, $p = .000$.

**Attendance**

Job satisfaction was not significantly correlated with school attendance rates, $r = -.027$, $n = 316$, $p = .631$. There was no relationship between the level of a school nurse’s education and attendance rates, $F(12, 327) = .635$, $p = .812$. The number of students served by the school nurse also did not have a significant relationship with attendance rates, $F(6, 336) = 2.099$, $p = .053$. Lastly, although approaching significance, attendance rates were not significantly correlated with hours spent on classroom education, $r = -.103$, $n = 326$, $p = .063$ or number of classroom visits per year for health education $r = -.031$, $n = 327$, $p = .576$.

**Discussion**

Certified School Nurses were more likely to visit the classroom than non-certified school nurses, and participants tended to be more satisfied with their jobs when they made more visits to the classroom for health education. This increased satisfaction may reflect the increased autonomy that nurses have when they are able to do classroom education; autonomy has been identified as an important component to school nurse’s job satisfaction (Denehy, 2008; DeSisto & DeSisto, 2004; Foley et al., 2004). A misunderstanding of school nurses’ qualifications and scope of practice has been well documented (Capparelli & Ilardi, 2005; Maughn & Adams, 2011; Cowell, 2012; Gurmankin, 2005). Certified School Nurses being more likely to perform classroom education may reflect a misunderstanding of non-certified school nurses’ scope of practice. In the comments section of the survey, several participants said that they were not allowed to conduct classroom sessions because they were not certified. However, this is a misinterpretation of the State Board of Education Administrative Code (Joint Committee on
Administrative Rules Administrative Code, 2014). While the Administrative Code states that nurses must hold a teaching endorsement to perform long-term classroom instruction, such as teaching a health education course. However, it also specifies that an RN can provide instruction on specific health or illness topics.

School nurses commonly face the challenge of not being able to impact students’ health or practice to the full extent of their license (Fleming, 2012). When school nurses are given the opportunity to teach health topics to students, not only can they positively impact students’ health, but they are practicing to the full extent of their practice. School nurses who teach health topics in the classroom are more likely to be satisfied; higher job satisfaction is associated with lower burnout, and job-related stress (Johnston, 1991; Spence Laschinger, Finegan, & Shambian, 2001; Stamps, 1997; and Tumulty, Jernigan, & Kohit, 1994, as cited in Foley, Lee, Wilson, Cureton, & Canham, 2004). The significant correlations between job satisfaction, number of classroom visits, and the opinion that students receive adequate health education suggests that nurses are more satisfied with their job when they believe that they can positively impact student’s health.

Number of students served was negatively correlated with job satisfaction as well as negatively correlated with the perception that students receive adequate health education. The negative impact of high student-to-nurse ratios on school nurse job satisfaction is consistent with previous research (Maughm & Adams, 2011). These negative correlations suggest that when school nurses serve more than the recommended number of students, they are unable to practice to the extent of their education; this is related to job dissatisfaction and they are unable to provide students with sufficient health education.
School attendance was not significantly correlated with several variables: job satisfaction, classroom health education, school nurse’s education, or number of students served. Previous studies have demonstrated the effect of having a nurse in the school on attendance (Hill & Hollis, 2012; Allen, 2003; Foster & Keele, 2006; Pennington & Delaney, 2008). This study suggests that this effect is universal, not due to any of the school nurse variables studied.

Time spent in the classroom contributes to a school nurse’s job satisfaction because nurses are more satisfied when they have a high level of autonomy (Denehy, 2008; DeSisto & DeSisto, 2004; Foley et al., 2004), are understood by administration (Capparelli & Ilardi, 2005; Maughn & Adams, 2011; Cowell, 2012), and have positive interactions with students (Stamps, 1997; Foley, 2004). Regardless of certification, administrators should allow school nurses to conduct classroom educational sessions to increase the nurses’ job satisfaction and reduce burnout and turnover.

Researchers have identified the need to increase visibility and demonstrate importance of school nurses (Rodriguez, Austria & Landai, 2011; Sheetz, 2012; Ryberg, Keller, Hine, & Christeson, 2003; Johnson, Begren & Westbrook, 2012). School nurses conducting classroom education is not only beneficial to the students’ health and the nurse’s job satisfaction, but it can increase the visibility of school nurses and demonstrate their importance.

There are several limitations to this study. The sample size was small relative to all school nurses in Illinois. The response rate was low, and nurses working for Chicago Public Schools (CPS) were not included due to unavailability of contact information. Only including Illinois School Nurses and not including nurses employed by CPS limits generalizability of the results. In the final comments of the survey, some participants indicated confusion with certain questions, which may have affected results.
The next step in this study is to include data from the Illinois Youth Survey and correlate classroom education, school nurse characteristics, and job satisfaction with student’s health outcomes. These outcomes include nutrition, exercise, drug use, and sexual choices.

Future research should be directed towards examining the reasons why administrators or teachers do not allow nurses to teach in the classroom and whether or not they are aware of the potential benefits. Lastly, future research should describe the impact of school nurses’ job satisfaction on burnout and turnover.
References


Joint Committee on Administrative Rules Administrative Code, 1.760 (2014).


### Table 1

Adapted Index of Work Satisfaction (IWS)

<table>
<thead>
<tr>
<th>IWS survey question</th>
<th>Component</th>
<th>Included in survey</th>
<th>Adaptation (if applicable) or Rationale for omission</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is my impression that a lot of nursing service personnel at this hospital are dissatisfied with their pay.</td>
<td>Pay</td>
<td>No</td>
<td>Refers to multiple nurses in a workplace</td>
</tr>
<tr>
<td>The present rate of increase in pay for nursing personnel at this hospital is not satisfactory.</td>
<td>Pay</td>
<td>No</td>
<td>Refers to multiple nurses in a workplace</td>
</tr>
<tr>
<td>An upgrading of pay schedules for nursing personnel is needed at this hospital.</td>
<td>Pay</td>
<td>No</td>
<td>Refers to multiple nurses in a workplace</td>
</tr>
<tr>
<td>I feel that I am supervised more closely than necessary.</td>
<td>Autonomy</td>
<td>Yes</td>
<td>N/A</td>
</tr>
<tr>
<td>I have too much responsibility and not enough authority.</td>
<td>Autonomy</td>
<td>Yes</td>
<td>N/A</td>
</tr>
<tr>
<td>On my service, my supervisors make all the decisions, I have little direct control over my own work.</td>
<td>Autonomy</td>
<td>No</td>
<td>Refers to multiple supervisors in a workplace</td>
</tr>
<tr>
<td>I am sometimes frustrated because all of my activities seem programmed for me.</td>
<td>Autonomy</td>
<td>Yes</td>
<td>N/A</td>
</tr>
<tr>
<td>I am sometimes required to do things on my job that are against my better professional nursing judgment.</td>
<td>Autonomy</td>
<td>Yes</td>
<td>N/A</td>
</tr>
<tr>
<td>There is too much clerical and ‘paperwork’ required of nursing personnel in this hospital.</td>
<td>Task requirements</td>
<td>Yes</td>
<td>“...required of school nurses at this school”</td>
</tr>
<tr>
<td>I think I could do a better job if I did not have so much to do all the time.</td>
<td>Task requirements</td>
<td>Yes</td>
<td>N/A</td>
</tr>
<tr>
<td>I could deliver much better care if I had more time with each patient.</td>
<td>Task requirements</td>
<td>Yes</td>
<td>“...more time with each student.”</td>
</tr>
<tr>
<td>There is a great gap between the administration of this hospital and the daily problems of the nursing service.</td>
<td>Organizational policies</td>
<td>No</td>
<td>Many administrative actions not applicable to school nursing practice</td>
</tr>
</tbody>
</table>

(continued)
<table>
<thead>
<tr>
<th>IWS survey question</th>
<th>Component</th>
<th>Included in survey</th>
<th>Adaptation (if applicable) or Rationale for omission</th>
</tr>
</thead>
<tbody>
<tr>
<td>There are not enough opportunities for advancement of nursing personnel at this hospital.</td>
<td>Organizational policies</td>
<td>Yes</td>
<td>&quot;...advancement of nursing personnel at this school.&quot;</td>
</tr>
<tr>
<td>Administrative decisions at this hospital interfere too much with patient care.</td>
<td>Organizational policies</td>
<td>Yes</td>
<td>&quot;...decisions at this school interfere too much with student care.&quot;</td>
</tr>
<tr>
<td>Nursing is not widely recognized as being an important profession.</td>
<td>Professional status</td>
<td>Yes</td>
<td>&quot;School nursing is not...&quot;</td>
</tr>
<tr>
<td>What I do on my job doesn’t add up to anything really significant.</td>
<td>Professional status</td>
<td>Yes</td>
<td>N/A</td>
</tr>
<tr>
<td>My particular job really doesn’t require much skill or ‘know-how.’</td>
<td>Professional status</td>
<td>Yes</td>
<td>N/A</td>
</tr>
<tr>
<td>It is hard for new nurses to feel ‘at home’ on my unit.</td>
<td>Interaction: nurse-nurse</td>
<td>No</td>
<td>Refers to multiple nurses in a workplace</td>
</tr>
<tr>
<td>The nursing personnel on my service are not as friendly and outgoing as I would like.</td>
<td>Interaction: nurse-nurse</td>
<td>No</td>
<td>Refers to multiple nurses in a workplace</td>
</tr>
<tr>
<td>There is a lot of ‘rank consciousness’ on my unit: nurses seldom mingle with those with less experience or different types of educational preparation.</td>
<td>Interaction: nurse-nurse</td>
<td>No</td>
<td>Refers to multiple nurses in a workplace</td>
</tr>
<tr>
<td>I wish the physicians here would show more respect for the skill and knowledge of the nursing staff.</td>
<td>Interaction: nurse-physician</td>
<td>Yes</td>
<td>&quot;I wish the administration here...knowledge of school nurses.&quot;</td>
</tr>
<tr>
<td>The physicians at this hospital look down too much on the nursing staff.</td>
<td>Interaction: nurse-physician</td>
<td>No</td>
<td>Nurse-teacher relationship not comparable to nurse-physician relationship</td>
</tr>
<tr>
<td>My present salary is satisfactory.</td>
<td>Pay</td>
<td>Yes</td>
<td>N/A</td>
</tr>
<tr>
<td>Considering what is expected of nursing service personnel at this hospital, the pay we get is reasonable.</td>
<td>Pay</td>
<td>No</td>
<td>Refers to multiple nurses in a workplace</td>
</tr>
<tr>
<td>From what I hear about nursing service personnel at other hospitals, we at this hospital are being fairly paid.</td>
<td>Pay</td>
<td>No</td>
<td>Refers to multiple nurses in a workplace</td>
</tr>
<tr>
<td>I feel I have sufficient input into the program of care for each of my patients.</td>
<td>Autonomy</td>
<td>Yes</td>
<td>&quot;...care for each of my students.&quot;</td>
</tr>
</tbody>
</table>

(continued)
<table>
<thead>
<tr>
<th>IWS survey question</th>
<th>Component</th>
<th>Included in survey</th>
<th>Adaptation (if applicable) or Rationale for omission</th>
</tr>
</thead>
<tbody>
<tr>
<td>A great deal of independence is permitted, if not required, of me on my job.</td>
<td>Autonomy</td>
<td>Yes</td>
<td>N/A</td>
</tr>
<tr>
<td>I have the freedom in my work to make important decisions as I see fit, and can</td>
<td>Autonomy</td>
<td>Yes</td>
<td>N/A</td>
</tr>
<tr>
<td>count on my supervisors to back me up.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am satisfied with the types of activities that I do on my job.</td>
<td>Task</td>
<td>Yes</td>
<td>N/A</td>
</tr>
<tr>
<td>requirements</td>
<td>requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have plenty of time and opportunity to discuss patient care problems with other</td>
<td>Task</td>
<td>No</td>
<td>Refers to multiple nurses in a workplace</td>
</tr>
<tr>
<td>nursing service personnel.</td>
<td>requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have sufficient time for direct patient care.</td>
<td>Task</td>
<td>No</td>
<td>Not the primary role of a school nurse</td>
</tr>
<tr>
<td>The nursing staff has sufficient control over scheduling their own work shifts</td>
<td>Organizational policies</td>
<td>No</td>
<td>Reference to shifts not applicable to school setting</td>
</tr>
<tr>
<td>in my hospital.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>There is ample opportunity for nursing staff to participate in the administrative</td>
<td>Organizational policies</td>
<td>Yes</td>
<td>...opportunity for school nurses...</td>
</tr>
<tr>
<td>decision-making process.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have all the voice in planning policies and procedures for this hospital and</td>
<td>Organizational policies</td>
<td>No</td>
<td>Many school policies not applicable to school nursing</td>
</tr>
<tr>
<td>my unit that I want.</td>
<td></td>
<td></td>
<td>practice</td>
</tr>
<tr>
<td>The nursing administrators generally consult with the staff on daily problems and</td>
<td>Organizational policies</td>
<td>No</td>
<td>Few nursing administrators in schools/school districts</td>
</tr>
<tr>
<td>procedures.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Most people appreciate the importance of nursing care to hospital patients.</td>
<td>Professional status</td>
<td>Yes</td>
<td>...importance of school nurses to students.</td>
</tr>
<tr>
<td>There is no doubt whatever in my mind that what I do on my job is really</td>
<td>Professional status</td>
<td>Yes</td>
<td>N/A</td>
</tr>
<tr>
<td>important.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It makes me proud to talk to other people about what I do on my job.</td>
<td>Professional status</td>
<td>Yes</td>
<td>N/A</td>
</tr>
<tr>
<td>If I had the decision to make all over again, I would still go into nursing.</td>
<td>Professional status</td>
<td>Yes</td>
<td>...go into school nursing.</td>
</tr>
</tbody>
</table>

(continued)
<table>
<thead>
<tr>
<th>The nursing personnel on my service pitch in and help one another when things get in a rush.</th>
<th>Interaction: nurse-nurse</th>
<th>No</th>
<th>Refers to multiple nurses in a workplace</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is a good deal of teamwork and cooperation between various levels of nursing personnel on my service.</td>
<td>Interaction: nurse-nurse</td>
<td>No</td>
<td>Refers to multiple nurses in a workplace</td>
</tr>
<tr>
<td>Physicians in general cooperate with the nursing staff on my unit.</td>
<td>Interaction: nurse-physician</td>
<td>No</td>
<td>Refers to multiple nurses in a workplace</td>
</tr>
<tr>
<td>There is a lot of teamwork between nurses and doctors on my unit.</td>
<td>Interaction: nurse-physician</td>
<td>No</td>
<td>Refers to multiple nurses in a workplace</td>
</tr>
<tr>
<td>Physicians at this hospital generally understand and appreciate what the nursing staff does.</td>
<td>Interaction: nurse-physician</td>
<td>Yes</td>
<td>&quot;Teachers at this school generally... what the school nurse does.&quot;</td>
</tr>
</tbody>
</table>
Table 2

Participant Licensure

Which of the following best describes your highest license or certification?

<table>
<thead>
<tr>
<th>Licensure</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certified Nursing Assistant</td>
<td>1</td>
<td>.3</td>
<td>.3</td>
<td>.3</td>
</tr>
<tr>
<td>Licensed Practical Nurse</td>
<td>7</td>
<td>1.9</td>
<td>1.9</td>
<td>2.2</td>
</tr>
<tr>
<td>Registered Nurse</td>
<td>319</td>
<td>86.7</td>
<td>88.6</td>
<td>90.8</td>
</tr>
<tr>
<td>Advanced Practice Nurse</td>
<td>15</td>
<td>4.1</td>
<td>4.2</td>
<td>95.0</td>
</tr>
<tr>
<td>None of the above</td>
<td>18</td>
<td>4.9</td>
<td>5.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>360</td>
<td>97.8</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Missing</td>
<td>8</td>
<td>2.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>368</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: Certified Nursing Assistant and None of the above were eliminated from the sample and removed from further analysis.*
Table 3
Participant Level of Education

<table>
<thead>
<tr>
<th>Which of the following best describes your highest level of education?</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School Diploma</td>
<td>2</td>
<td>.5</td>
<td>.6</td>
<td>.6</td>
</tr>
<tr>
<td>Associate degree in nursing</td>
<td>51</td>
<td>13.9</td>
<td>14.2</td>
<td>14.7</td>
</tr>
<tr>
<td>Associate degree in another field</td>
<td>4</td>
<td>1.1</td>
<td>1.1</td>
<td>15.8</td>
</tr>
<tr>
<td>Diploma degree in nursing</td>
<td>22</td>
<td>6.0</td>
<td>6.1</td>
<td>21.9</td>
</tr>
<tr>
<td>Bachelor's degree in nursing</td>
<td>109</td>
<td>29.6</td>
<td>30.3</td>
<td>52.2</td>
</tr>
<tr>
<td>Bachelor's degree in another field</td>
<td>27</td>
<td>7.3</td>
<td>7.5</td>
<td>59.7</td>
</tr>
<tr>
<td>School Nurse Certificate program</td>
<td>42</td>
<td>11.4</td>
<td>11.7</td>
<td>71.4</td>
</tr>
<tr>
<td>Master's degree in school nursing</td>
<td>8</td>
<td>2.2</td>
<td>2.2</td>
<td>73.6</td>
</tr>
<tr>
<td>Master's degree in another area of nursing</td>
<td>32</td>
<td>8.7</td>
<td>8.9</td>
<td>82.5</td>
</tr>
<tr>
<td>Master's degree in education</td>
<td>41</td>
<td>11.1</td>
<td>11.4</td>
<td>93.9</td>
</tr>
<tr>
<td>Master's degree in another field</td>
<td>17</td>
<td>4.6</td>
<td>4.7</td>
<td>98.6</td>
</tr>
<tr>
<td>Doctoral degree in nursing</td>
<td>1</td>
<td>.3</td>
<td>.3</td>
<td>98.9</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>1.1</td>
<td>1.1</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>360</td>
<td>97.8</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Missing</td>
<td>8</td>
<td>2.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>368</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 4

Index of Work Satisfaction Scores

<table>
<thead>
<tr>
<th>Component</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pay</td>
<td>3.97</td>
</tr>
<tr>
<td>Autonomy</td>
<td>5.34</td>
</tr>
<tr>
<td>Task Requirements</td>
<td>4.93</td>
</tr>
<tr>
<td>Organizational Policies</td>
<td>3.72</td>
</tr>
<tr>
<td>Professional Status</td>
<td>5.47</td>
</tr>
<tr>
<td>Interaction</td>
<td>4.52</td>
</tr>
<tr>
<td>Overall Work Satisfaction</td>
<td>4.96</td>
</tr>
</tbody>
</table>
Appendix A
Survey invitation & Consent statement

You are invited to participate in an online survey about your educational background and nursing activities. All nurses, of any licensure, who work in schools in the State of Illinois are welcome to participate. Please read this page and ask any questions you may have before continuing to the survey questions. This study is being conducted by Dr. Lisa Searing at Illinois Wesleyan University. You must be at least 18 years old to take this survey.

The purpose of this study is to examine the relationship between school districts, nurses, and student academic and health outcomes in Illinois. Other parts of the study have collected information about school districts, while information about academic and health outcomes were collected previously. This survey asks about your educational background, licensure, and nursing activities.

Your participation in this survey is voluntary. Your decision to participate, or not to participate, will not affect your current or future relations with Illinois Wesleyan University or any of its representatives. The decision to participate in this research project is voluntary and you can refuse to answer any question. Even if you begin the web-based online survey, you can stop at any time.

Your participation in this survey is confidential. Your responses to the survey questions will be entered on a secure website and saved in a computer file only accessible by the researcher. Any reports or presentations based on this study will not include any information that will make it possible to identify you or your school district. The possible risks to you are minimal; any accidental disclosure of responses that might identify you or your school district are unlikely to cause damage to your finances, employment, or reputation.

In appreciation for completing the survey, you will be invited to enter a random drawing for one of these prizes: “I’m Just a Nurse” poster (10), “Fast Facts for the School Nurse: School Nursing in a Nutshell” book (2), or 3M Littmann Lightweight II S.E. Stethoscope (1).

If you have any questions about this study or about the informed consent process, you may contact Dr. Lisa Searing (309-556-3271, lsearing@iwu.edu). If you have questions or concerns regarding this study and would like to speak with someone other than the researcher, you may contact Dr. Brian Brennan, Institutional Review Board Chair, Illinois Wesleyan University, at 309-556-3163 or irb@iwu.edu.

By clicking on the “accept” button below, you are indicating that you consent to participate in this study. Please print out a copy of this consent form for your records.

Thank you for your time and participation.

Sincerely,
Lisabeth M. Searing, PhD, RN
Assistant Professor
Appendix B
Selected items from School Nursing Survey

How many students do you serve in your position?
○ Less than 100
○ 100-500
○ 501-1000
○ 1001-1500
○ 1501-2000
○ 1801-2000
○ More than 2000

My present salary is satisfactory.
○ Agree 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ Disagree 7

School nursing is not widely recognized as being an important profession.
○ Agree 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ Disagree 7

There is too much clerical “paperwork” required by school nurses at this school.
○ Agree 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ Disagree 7

I feel that I am supervised more closely than is necessary.
○ Agree 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ Disagree 7

Most people appreciate the importance of school nursing to students.
○ Agree 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ Disagree 7

There is no doubt whatever in my mind that what I do on my job is really important.
○ Agree 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ Disagree 7

I feel I have sufficient input into the programs of care for each of my students.
○ Agree 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ Disagree 7

I think I could do a better job if I did not have so much to do all the time.
○ Agree 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ Disagree 7

I have too much responsibility and not enough authority.
○ Agree 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ Disagree 7

There are not enough opportunities for advancement of school nurses.
○ Agree 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ Disagree 7
I am satisfied with the type of activities that I do on my job.

Disagree 7

There is ample opportunity for school nurses to participate in the administrative decision-making process.

Disagree 7

A great deal of independence is permitted, if not required, of me.

Disagree 7

What I do on my job does not add up to anything really significant.

Disagree 7

I am sometimes frustrated because all of my activities seem to be programmed for me.

Disagree 7

I am sometimes required to do things on my job that are against my better nursing judgment.

Disagree 7

Administrative decisions at this school interfere too much with student care.

Disagree 7

It makes me proud to talk to other people about what I do on my job.

Disagree 7

I wish the administration here would show more respect for the skills and knowledge of school nurses.

Disagree 7

I could deliver much better care if I had more time with each student.

Disagree 7

If I had the decision to make all over again, I would still go into school nursing.

Disagree 7

My particular job doesn’t require much skill or “know-how.”

Disagree 7

I have the freedom in my work to make important decisions as I see fit, and can count on my supervisors to back me up.

Disagree 7
Teachers at this school generally understand and appreciate what the school nurse does.

- Agree 1  2  3  4  5  6  Disagree 7

The transition to school nursing was very challenging.

- Agree 1  2  3  4  5  6  Disagree 7

I would consider most of my interactions with students to be positive.

- Agree 1  2  3  4  5  6  Disagree 7

I have positive relationships with students’ families.

- Agree 1  2  3  4  5  6  Disagree 7

I am regularly told by students that they are glad that I am at the school.

- Agree 1  2  3  4  5  6  Disagree 7

I would be more satisfied with my job if I remained in the same building for the entire school day.

- Agree 1  2  3  4  5  6  Disagree 7

- Not applicable; I remain in the same building for the entire school day.

I have sufficient time and resources to practice to the full extent of my education.

- Agree 1  2  3  4  5  6  Disagree 7

The students at this school receive adequate health education sessions from the school nurse in the classroom each year.

- Agree 1  2  3  4  5  6  Disagree 7

Please estimate the amount of HOURS spent each WEEK on the following activities.

- Classroom education (Text box)
- Direct care (Text box)
- One-on-one student education (Text box)
- Record/paperwork keeping (Text box)
- Communicating with parents, administration, or teachers (Text box)
- Total hours (calculated)

In a school year, approximately how many visits do you make to classes for health education?

For example: 2 visits to each of 3 kindergarten classes to teach about nutrition = 6.

Do NOT include any classes taught in CNA or medical professional programs.

(Text box)
Which of the following best describes your highest license or certification?
- Certified Nursing Assistant
- Licensed Practical Nurse
- Registered Nurse
- Advanced Practice Nurse
- None of the above

Are you a Certified School Nurse? (Select all that apply.)
- Yes, Illinois Certified School Nurse
- Yes, National Certified School Nurse
- No, but I am currently taking courses for certification
- No, but I would like to take courses for certification
- None of the above

Which of the following best describes your highest level of education?
- High School Diploma
- Associate degree in nursing
- Associate degree in another field
- Diploma degree in nursing
- Bachelor’s degree in nursing
- Bachelor’s degree in another field
- School Nurse Certificate program
- Master’s degree in school nursing
- Master’s degree in another area of nursing
- Master’s degree in education
- Master’s degree in another field
- Doctoral degree in nursing
- Doctoral degree in education
- Doctoral degree in another field
- Other

What school district are you employed by? (text box)

Please share any comments about the survey or school nursing here. (text box)